

①

Hill 5300

April 22, 1963

apparent
Thickness

Unit No.

Rock Type

①

Chert Pebble conglomerate

in coarse ls. matrix

Fresh color - light brownish
gray - weathered color - tan

Chert pebbles up to 1 inch.

Fossils: ? Neospirifer, largePerbya, Orthis, corals, huge
crinoid, brachiopods, Omphalotrochus,Saccinichia (small),Enalates, Leptotids,

Top of ledge (dip 5-10°)

Covered slope -

9.6'

②

Platy calcarenite in cherty
pebbles in large rusty
chert nodules

5.5'

In gully

③

Lenticular calcarenite in rusty
patches

5.5'

Covered slope

27.5'

④

Calcarenite congl. in pebbles in
granules of rusty chert

11'

SP = 97

CP = 202

DR = 50'

5.5
6

33.0
8.8

41.8

②

Apr. 22 Hill 5300

Grant level - eye height 5.5'

Decrease

↑

↓

⑤

Pop. tank

Covered slope of 2 lengths to V' of rusty line at the top 10'

shale - brownish green to greenish brown ls. beds (5' thick) about every 10'; ls. is oolitic
Dip approx. 11° 27.5'

⑥

Shaly limestone - brownish color. 11' 6-12" ls beds to 6" to 3' of shale between ls. beds.

⑦

Gray and brown shale to 6"-12" bed of brown siltstone in middle, about 11' above base. 22'

⑧

Thinly medium bedded platy ^{limy} siltstone to intercalated shales, lime increasing toward the top 33'

⑨

Conglomerate to chert pebbles and ls. pebbles + boulders; large crinoid stems.
Strophomena or Diplorus 5.5'

⑩

Evenly bedded ls. to layers of rusty chert to intercalated 10-12" beds of silty shale. Lime becomes 23'

(3)

less silty & fossils appearing at the top. Derbya? Fossil collected at the top. 4-22-1

Previous 4 units are brown in color.

- (11) Grey conglomerate; large lime cobbles, chert pebbles, large crinoid stems, Meekella caparata?, Neosprifer, Flushtia, Diplanus, Orthotocchia, Enteleles, Syringopora, type coral, Top bed is a gray limestone. 9.5'

- (12) Even bedded chunky limestone in beds 4-10" thick & occasional intercalated 6" beds of finely bedded siltstone. Leptodus, Flushtia, 3" bands of rusty chert. (4-22-2) 38.5' 7

? Spiridophora
Platy siltstone top 6'

- (13) Tan conglomerate - very poorly sorted chert pebbles, ls. cobbles and boulders. 5.5'

DR =

Good ledge former.

Conoid shape

9.5'

$$\begin{array}{r} 55 \\ 27.5 \\ \hline 82.5 \end{array}$$

$$\begin{array}{r} 24 \\ 5.5 \\ \hline 120 \\ 120 \\ \hline 132 \end{array}$$

$\begin{array}{r} 56 \\ 5.5 \\ \hline 280 \\ 280 \\ \hline 3080 \end{array}$	$\begin{array}{r} 39 \\ 5.5 \\ \hline 194 \\ 194 \\ \hline 2134 \end{array}$
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(9)

- (14) Block of some conglomerate 16'
- (15) Thin to medium bedded
calcareous & siliceous fragments 27.5'
Brown & grey.
- (16) Brown finely laminated calc.
siltstone & some reddish chert. 38'
At 82.5' level 2' bed of
grey ls. Another 2' thin bed at
182' level. 5' lens of grey
lime at the 213' level.
Top 33' is a soft grey shale.
- (17) Red, tan, grey boulder lime
conglomerate & much chert. Looks
like a breccia. Color is strikingly 5.5'
different from below. Forms a
cap on the top knob.
Numerous solitary corals. Entolites.
Some branching corals of Syringopora
type. Large orthoekid - possibly Meekella
This is top of Hill # 5300
Bach & dendritic scoria & lophidium -
Edrio or Echinostegia. Large spines
evenly spaced over VV.

(5)

Windmill Hill

April 22, 1963

SE of Windmills - chert conglomerate = C
chert pebbles in chert matrix.

Below chert on East side of Windmill Hill
Grey arenaceous limestone or calcarenite
Thickness 10' - 20'. Also caps
small rise NE of Windmill Hill.

Green & brown siltstone below the line.

Trace brown conglomerate around main hill

Rock above brown congl. is tan & gray
massive conglomeratic limestone c. 15' thick
& scattered chert pebbles & big crinoid stems.
Typical Skinner Ranch fm.

20 levels is top of slip block at
WMH

275' to base of ledge (conglomerate)

ledge 49.5' thick

The intervening shale is 55' thick
Is actually a covered slope.

Base of upper ledge is 3' thick bed
c. crinoid stems

(6)

Coscinophora in upper ledge

33' to base of upper ledge, next Hill to Northeast. (Middle Hill)

On hill 5021, west side, ledges one level apart.

The lower ledge disappeared shortly NE of middle hill. The lower ledge is NE hill \pm be, this lower ledge (Carter says no!)

Lower ledge in NE hill is about 100' long then it disappears also.

Little knoll at NE end of ridge containing 5021. At base is about 20' of Lenoir Hills fm. (coarse congl.), top is Decie Ranch ls. congl. & corallid stems.

Lenoir Hills congl. is about 50' thick on NE side of tip at end of ridge 5021. Same congl. is only 17' thick on SW side.

Base of hill that projects East from 5021 above 4500 contour is coarse grained ss. \bar{p} normal dip. Top of hill covered by rubble from

$$\begin{array}{r} 5.5 \\ 17 \\ \hline 385 \\ 55 \\ \hline 93.5 \end{array}$$

(7)

Stemmer Ranch fm.

Note: The lower ledge in middle hill seems to simply quit. The apparent double ledge previously noted is probably simply a manifestation of greater thickness of upper ledge, & on the aspect seen due to Vong back down dip in the hill.

4-2B-1

Measured from bed containing Neospirifer, Oriskania, Nechella or Geyrella, Huxleya, Rhynchonella, large Uddenella, Murchella, large Crinoid columnals, small solitary corals & Helospira.

Levelled slope 93.5'

Thin bedded (6-8") of dark gray calcarenite to rusty gray on bedding planes up to 2" thick & intercalated brown platy siltstone

Levelled slope 11'

Base of cliff composed of brown conglomerate, chert pebbles & ls boulders.
Lepidus, 82.5'

(8)

Dark grey ls. 6" beds & chert layers
Orthis, *Reticularina*? *Striatifera*?
Hustedia, richofenid of some sort,

4-23-2 Back slope of Hill 5300 at East end.
Fossils: *Murchella*, large ermod columnals,
Girardinella, *Orthoceras*, *Rhipidomella*,
Sullivan Peak mem.
Grey calcarenite & chert bands on
bedding planes
Syringothyris, leptaetid of some sort,
Hustedia

(9)

Hill N of Hess Ranch

April 24, 1963

① Wolfcamp conglomerate at base of Hill 71.5'

② Covered slope to top of hill at extreme west end of 4-24-1 63'

Isolated strike & dip on east part of hill North of Hess Ranch House

Dip direction is N20E

Dip 5°

Strike N70W

Strike N45E

Dip 15° N

East of last shot

$$\begin{array}{r}
 4.95 \\
 26 \\
 \hline
 298.8 \\
 99.6 \\
 \hline
 129.18
 \end{array}$$

$$\begin{array}{r}
 5.5 \\
 80 \\
 \hline
 440.0
 \end{array}$$

(10)

Hill ≤ 305

4-24-2

April 24, 1963

Hess Ranch Horst measured from road.

① Covered slope 22'

② Limestone congl. & chert pebbles and lime cobbles, massively bedded, rounded weathered surfaces, tan weathered color, fresh gray. Section measured from rd. to base of camp. Anomalous dips, massive initial cross-bedding? Cap dolomitized from 17 units up to top. 440'

③ More of same as ② dip impossible to determine. On back slope of hill. Just a guess $\rightarrow 30' \pm$

④ \rightarrow dip on back slope ca. 30° N 20° W

26 levels at 25°

ca. 130'

more above unit ③

across back spur heading N 25° W (ca down dip) congl. & dolomitized congl. in calcarenite matrix, massive X beds with many odd dips

top beds of back slope

coarse dark dolomite

another dip & st. d. = 25° N, st. = N 60° E

(11)

75' along back spur (25° dip)
to level of fossil hash
Leptodus Neophricodothyris
big Derbyia?

95' (at 25° dip) to base of shale
at base of knob
top ls bed has Hustedia, Astiplocus,
Neospir. Rhip. on skin of
silicification

50' yellow shale w/ thin silty ls layers

20' Massive tan bioherm cap to knob

85' Dolomite cap to back slope
huge crin cols on topmost bed pls.

$$\begin{array}{r} 5.3 \\ 7 \\ \hline 37.1 \end{array}$$

$$\begin{array}{r} 5.3 \\ 32 \\ \hline 106 \\ 159 \\ \hline 170 \end{array}$$

(12)

Exotic Block on L.M.

4-25-63

We will measure the main exotic block starting from the upper coarse brown conglomerate. This same congl. occurs in 3 separate beds in the low hill adjoining ours to the East. Here the 3 beds are separated by platy siltstones or sandstones. Since these congl. are possibly not in place in relation to the main exotic block, we are starting at the top of a similar congl. as a datum in the main block. Top of saddle is start.

- ① Top of brown coarse congl. comprised of large ls. cobbles, very poorly sorted.
Shaly slope. REG using Brunton set at 15° dip. 53'
- ② Grey & brown congl. with smaller cobbles and pebbles. Crinoid stems, ~~grey~~ ls. pebbles mainly, little chert. 53'
- ③ Covered slope 170'
Covered with brown-grey conglomerate (Assume congl. under fault?)
- ④ Grey to tan coarsely crystalline ls. 37' to
Grey on fresh, tan on weathered base of large
thinly laminated, 6-2' beds. congl. boulders

$$\begin{array}{r}
 4.5 \\
 19 \\
 \hline
 315 \\
 45 \\
 \hline
 765
 \end{array}$$

$$\begin{array}{r}
 4.5 \\
 25 \\
 \hline
 225 \\
 90 \\
 \hline
 1125
 \end{array}$$

$$\begin{array}{r}
 4.5 \\
 32 \\
 \hline
 90 \\
 135 \\
 \hline
 144
 \end{array}$$

$$\begin{array}{r}
 4.5 \\
 5 \\
 \hline
 22.5
 \end{array}$$

$$\begin{array}{r}
 4.5 \\
 13 \\
 \hline
 135 \\
 45 \\
 \hline
 585
 \end{array}$$

$$\begin{array}{r}
 4.5 \\
 9 \\
 \hline
 40.5
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 6 \\
 \hline
 270
 \end{array}$$

(13)

WC cgl.

(5)

Now going 35° dip. Base of huge
cond. boulders! Congl. tan & gray
composed mainly of gray ls. cobbles
and pebbles, some rusty chert pebbles.
Very massively bedded. Some boulders
appear to be quite cherty, others almost
completely ls. boulders of considerable
size.

144'

(6)

Coarsely blue calcarenite

22.5'

(7)

Like on Wardmill Hill typical dark
pebble congl.

1'

(8)

Coarsely blue ls.

40.3'

(9)

Thin pebble congl.

3/6

4.5'

(10)

Covered slope

27'

(11)

Coarsely blue calcarenite, massive
bedded

76.5'

Top of WC

(12)

Apparently same but darker
brown. Looks dolomitized.
Level 14 is top of hill.
Continued to base of Leonard Mtn.

112.5'

(13)

Cover

58.5'

$$\begin{array}{r} 45 \\ 9 \\ \hline 405 \end{array}$$

(14)

(14)

Coarsely thin tan calcarenite
Deeply weathered.
Swale at base of mountain

40.5'

Rubble slope on Leonard Mtn. contains
boulders of congl. similar to those found
on eratic block.